Claims

[c1] A method for identifying an inhibitor of a dual substrate enzyme; wherein a first substrate is a macromolecule that is enzymatically modified, in the presence of the dual substrate enzyme, to accept the radiolabeled portion of a second substrate, said method comprising:

a. adding a capture resin to a buffered mixture of an enzyme, allowing the enzyme to catalyze transfer of the radiolabeled portion of the radiolabeled second substrate to the non-radiolabeled first substrate, radiolabeled first substrate, and a radiolabeled second substrate, in the presence or absence of a test compound;

b. removing unreacted radiolabeled second substrate;

c. adding a scintillant resin to the enzyme-radiolabeled first substrate mixture; and

d. measuring the amount of radiolabeled first substrate reacted in the presence of a test compound by scintillation counting, measuring the amount of radiolabeled first substrate reacted in the absence of a test compound by scintillation counting, and comparing the two measurements.

[c2] 2. A method according to Claim 1 wherein the first substrate is a macromolecule selected from a peptide or protein.

[c3] 3. A method according to Claim 2 wherein the first substrate is an acyl carrier protein (ACP).

[c4] 4. A method according to Claim 3 wherein the enzyme is selected from a fatty acid biosynthesis enzyme.

[c5] 5. A method according to Claim 1 wherein the enzyme is selected from a phosphate transfer enzyme.

[c6] 6. A method according to Claim 5 wherein the enzyme is selected from a protein kinase or protein phosphatase enzyme.

[c7] 7. A method according to claim 1 wherein the resin is an ionically charged

resin.

[c8] 8. A method according to claim 1 or 7 wherein the scintillant is a scintillation proximity assay resin (SPA) as the scintillant used for measuring the radiolabeled first substrate.

[c9] 9. A method according to Claim 1 wherein unreacted radiolabeled second substrate is removed by filtration.

[c10] 10. A method according to Claim 9 wherein the filtration of radiolabeled second substrate is carried out using an automated filtration and washing apparatus.